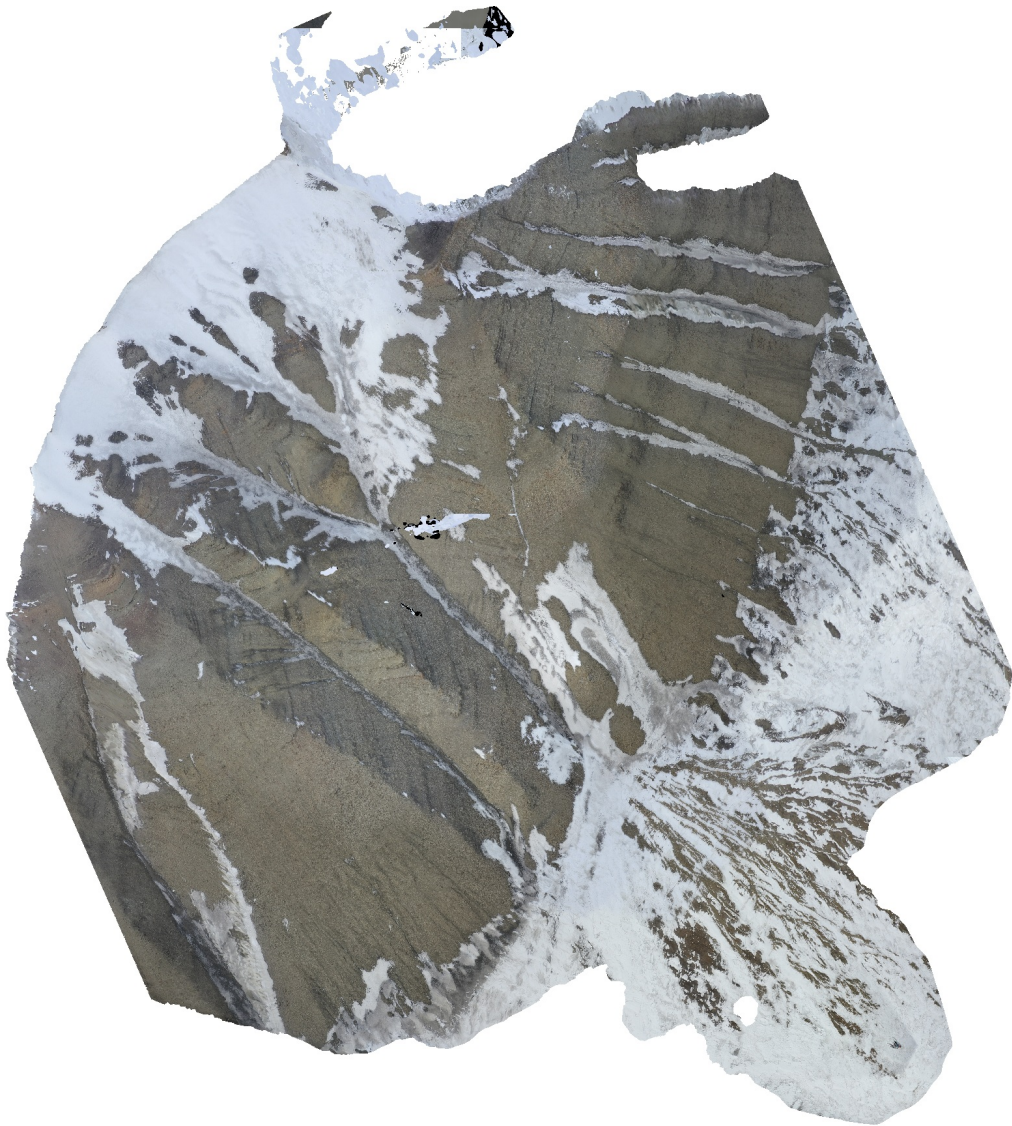


Friedrichfjellet

Processing Report
10 March 2021



Survey Data

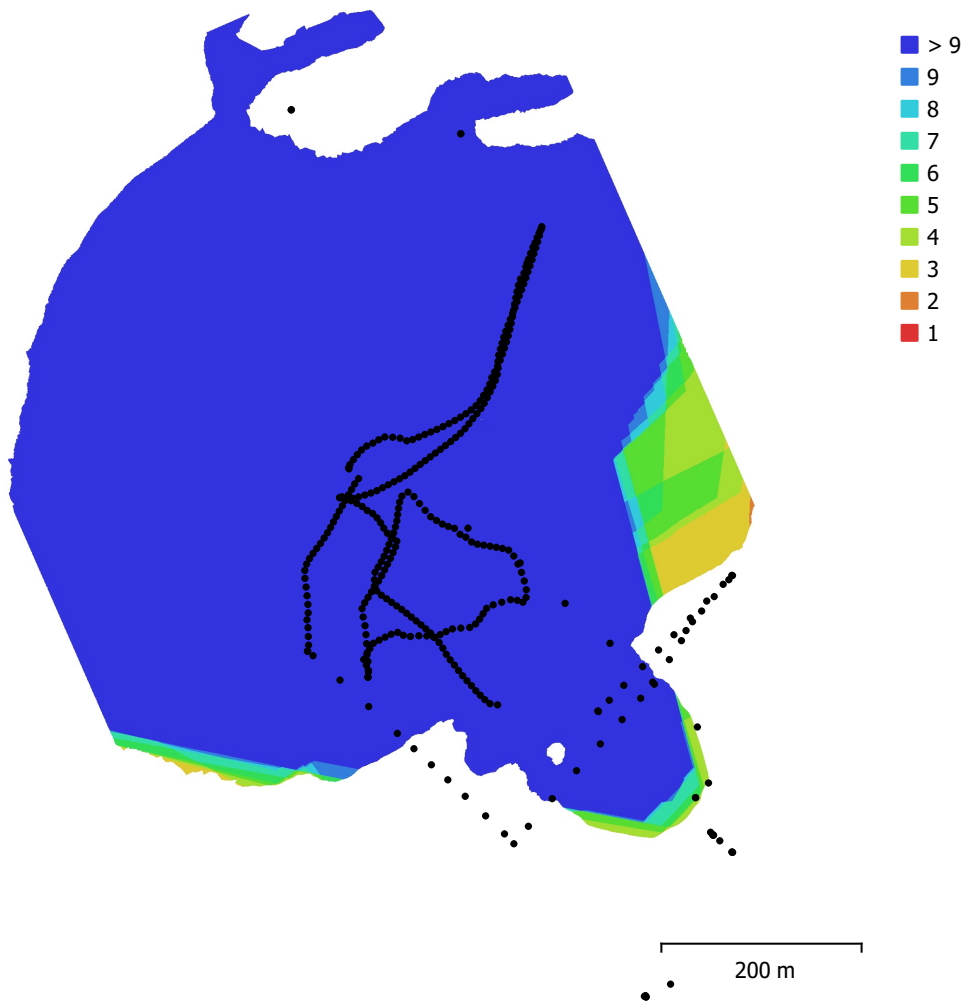


Fig. 1. Camera locations and image overlap.

Number of images:	342	Camera stations:	342
Flying altitude:	169 m	Tie points:	72,702
Ground resolution:	4.38 cm/pix	Projections:	825,569
Coverage area:	0.409 km ²	Reprojection error:	0.513 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
L1D-20c (10.26mm)	5472 x 3648	10.26 mm	2.41 x 2.41 μ m	No

Table 1. Cameras.

Camera Calibration

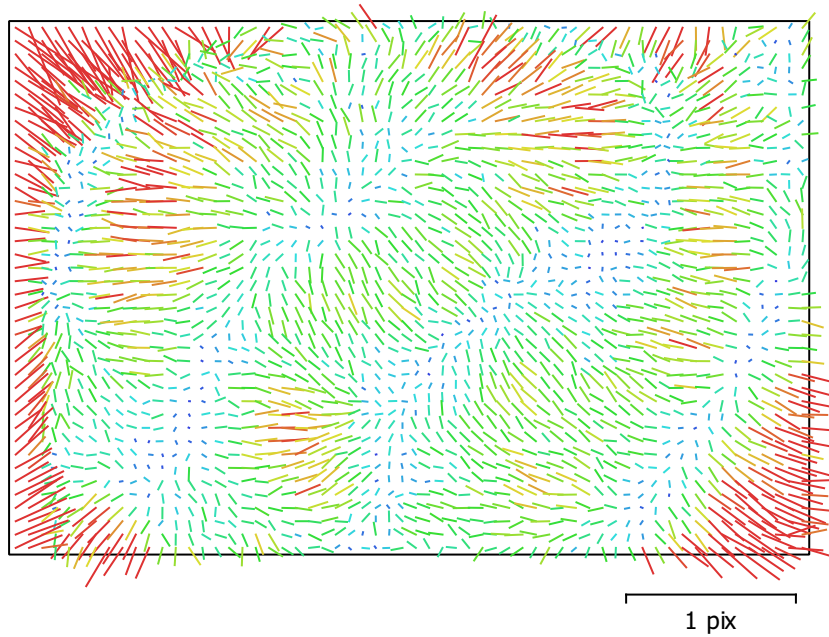


Fig. 2. Image residuals for L1D-20c (10.26mm).

L1D-20c (10.26mm)

342 images

Type	Resolution	Focal Length	Pixel Size
Frame	5472 x 3648	10.26 mm	2.41 x 2.41 μm

	Value	Error	F	Cx	Cy	K1	K2	K3	P1	P2
F	4338.93	0.027	1.00	0.11	-0.69	-0.08	0.17	-0.15	0.10	-0.40
Cx	4.71818	0.05		1.00	-0.17	0.08	-0.04	0.03	0.97	-0.16
Cy	-49.0673	0.057			1.00	-0.10	0.03	-0.02	-0.15	0.68
K1	0.00340672	2.1e-05				1.00	-0.95	0.89	0.07	-0.17
K2	0.0357177	8.5e-05					1.00	-0.98	-0.03	0.07
K3	-0.0387177	0.00011						1.00	0.02	-0.06
P1	-2.3329e-05	3.9e-06							1.00	-0.15
P2	-0.0036465	2.4e-06								1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

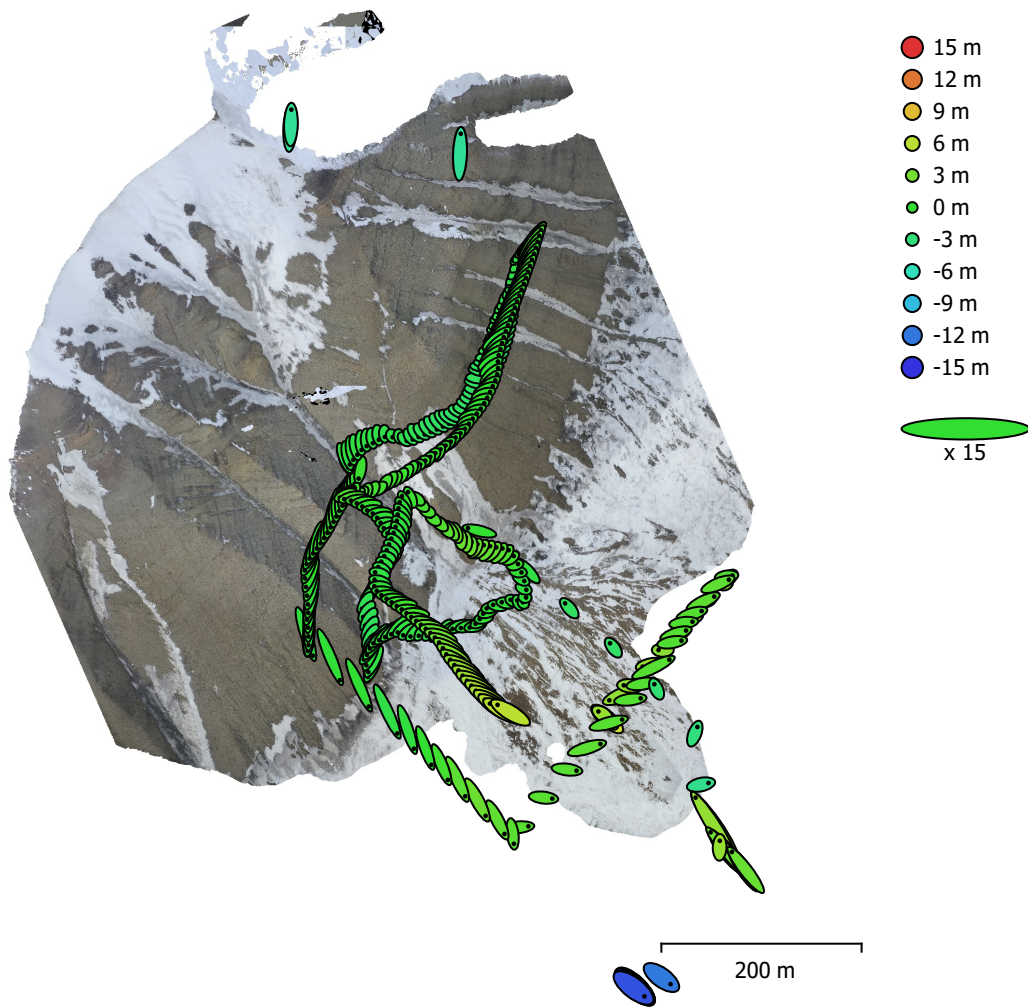


Fig. 3. Camera locations and error estimates.

Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
Estimated camera locations are marked with a black dot.

X error (m)	Y error (m)	Z error (m)	XY error (m)	Total error (m)
0.924159	1.08346	2.54827	1.42406	2.91918

Table 3. Average camera location error.
X - Longitude, Y - Latitude, Z - Altitude.

Digital Elevation Model

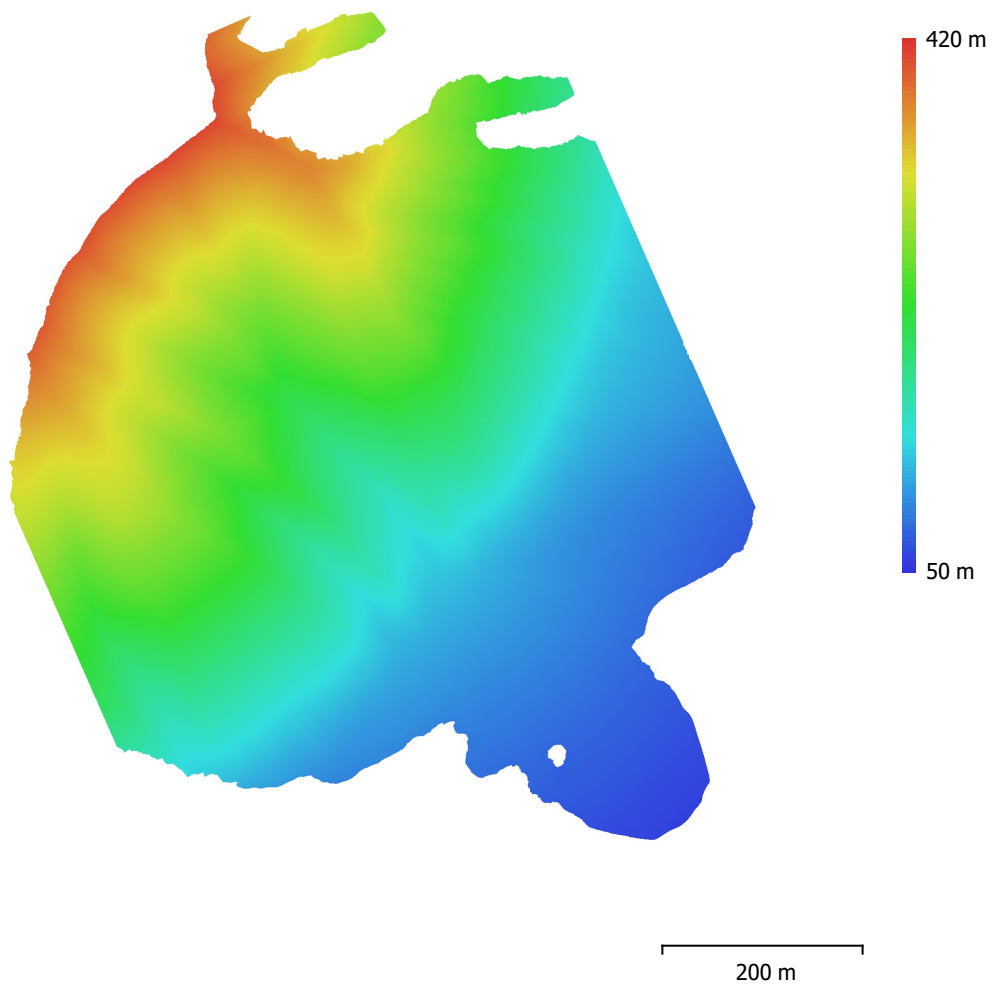


Fig. 4. Reconstructed digital elevation model.

Resolution: 19.7 cm/pix
Point density: 25.6 points/m²

Processing Parameters

General

Cameras	342
Aligned cameras	342
Coordinate system	WGS 84 (EPSG::4326)
Rotation angles	Yaw, Pitch, Roll

Point Cloud

Points	72,702 of 109,351
RMS reprojection error	0.259317 (0.513278 pix)
Max reprojection error	1.65088 (23.7439 pix)
Mean key point size	1.71104 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	17.8201

Alignment parameters

Accuracy	Highest
Generic preselection	No
Reference preselection	No
Key point limit	40,000
Tie point limit	4,000
Guided image matching	No
Adaptive camera model fitting	No
Matching time	5 hours 40 minutes
Matching memory usage	1.25 GB
Alignment time	6 minutes 12 seconds
Alignment memory usage	210.80 MB

Optimization parameters

Parameters	f, cx, cy, k1-k3, p1, p2
Adaptive camera model fitting	No
Optimization time	14 seconds
Software version	1.6.1.10009
File size	31.76 MB

Depth Maps

Count	342
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Processing time	4 hours 45 minutes
Memory usage	10.35 GB
Software version	1.6.1.10009
File size	1.72 GB

Dense Point Cloud

Points	93,375,529
Point colors	3 bands, uint8

Depth maps generation parameters

Quality	High
Filtering mode	Mild
Processing time	4 hours 35 minutes
Memory usage	10.33 GB

Dense cloud generation parameters

Processing time	4 hours 6 minutes
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Memory usage	17.84 GB
Software version	1.6.1.10009
File size	1.30 GB
Model	
Faces	4,857,656
Vertices	2,430,985
Vertex colors	3 bands, uint8
Texture	16,384 x 16,384, 4 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Processing time	4 hours 45 minutes
Memory usage	10.35 GB
Reconstruction parameters	
Surface type	Arbitrary
Source data	Depth maps
Interpolation	Enabled
Strict volumetric masks	No
Processing time	9 hours 8 minutes
Memory usage	13.50 GB
Texturing parameters	
Mapping mode	Generic
Blending mode	Mosaic
Texture size	16,384
Enable hole filling	Yes
Enable ghosting filter	Yes
UV mapping time	1 minutes 44 seconds
Blending time	28 minutes 34 seconds
Software version	1.6.1.10009
File size	527.69 MB
Tiled Model	
Texture	3 bands, uint8
Depth maps generation parameters	
Quality	High
Filtering mode	Mild
Processing time	4 hours 35 minutes
Memory usage	10.33 GB
Reconstruction parameters	
Source data	Dense cloud
Tile size	256
Face count	Medium
Enable ghosting filter	No
Processing time	1 hours 11 minutes
Memory usage	3.38 GB
Software version	1.7.1.11797
File size	445.41 MB
System	
Software name	Agisoft Metashape Professional
Software version	1.7.1 build 11797
OS	Windows 64 bit
RAM	127.78 GB
CPU	Intel(R) Core(TM) i9-9900K CPU @ 3.60GHz
GPU(s)	GeForce RTX 2080